

Application No.: 10/029,084

Docket No.: 65856-0034

REMARKS/ARGUMENTS

Applicants have reviewed the detailed Office Action mailed 12/24/2003 and thank Examiner Joyce for the indication of allowable subject matter. Claims 1-9 and 13-15 were rejected. Claims 11 and 12 were withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a non-elected species. Claim 10 was indicated as being allowable if rewritten in independent form. In this paper, claims 1 and 13 have been amended and new claim 16 has been added. However, no new matter has been added. Further, no claims have been cancelled. Thus, claims 1-10 and 13-16 will be pending upon entry of this amendment. Applicants request reconsideration of the pending claims in view of the following remarks.

Entry of this Amendment is proper under 37 CFR §1.116 because this Amendment: (a) places the application in condition for allowance (for the reasons discussed herein); (b) does not raise any new issue requiring further search and/or consideration because the amendments amplify issues previously discussed throughout prosecution; and (c) places the application in better form for appeal, should appeal be necessary. This Amendment is necessary and was not earlier presented because it is made in response to arguments raised in the final rejection. Entry of this Amendment is thus respectfully requested.

Allowable Subject Matter

Claim 10 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In accordance with the Examiner's suggestion, claim 10 has been rewritten in independent form as new claim 16, including all of the limitations of base claim 1 and intermediate claims 4-9.

Drawings

The drawings were objected to under 37 CFR 1.83(a) because the Examiner indicated that the drawings must show every feature of the invention specified in the claims. The Examiner indicated that "the 'outer tube shaft' and 'stepped diameter inner tube shaft' must be shown or the feature(s) canceled from the claim(s)." Applicants respectfully traverse the objection. More particularly, the outer tube shaft and the stepped diameter inner tube shaft are

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both shown, for example, in Figure 3 and supported by paragraph [0018] of Applicants' specification. For at least this reason, Applicants respectfully request that the drawing objection be withdrawn.

#### Claim Rejections – 35 USC §112

Claim 15 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicants regard as the invention. Particularly, the Examiner indicated that he did not fully understand the phrase "wherin an outer tube shaft supports one of said cones rigidly secured thereto, and a stepped diameter inner tube shaft supports the second of said cones, each respective tube shaft supported on a plurality of spaced pilot bearings" recited in claim 15.

Paragraph [0018] of Applicants' specification recites, in pertinent part, "an outer tube shaft 50 supports the cone 14' which is rigidly secured thereto, as shown. A stepped diameter inner tube shaft 52, i.e., having multiple diameters as also shown, provides a support shaft for the input cone 12' positioned oppositely of the output cone 14' situated at the second end of the CVT structure 10'. The respective tube shafts 50, 52 are supported on plurality of spaced pilot bearings 54, 56, as depicted." When read in light of paragraph [0018] and Figure 3, claim 15 particularly points out and claims subject matter that Applicants regard as the invention and, therefore, complies with 35 U.S.C. §112, second paragraph. Applicants respectfully request that the rejection be withdrawn.

#### Claim Rejections – 35 USC §103

A. Claims 1-9, 13, and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kohn (U.S. Patent No. 1,459,979). For at least the following reasons, Applicants respectfully traverse the rejection.

Regarding claims 1-9 and 13 as amended, nowhere does Kohn teach, suggest or disclose a continuously variable transmission that includes a pair of axially spaced, *radially floating* cones or a pair of spaced apart countershafts relatively rotatable within a housing. Instead, Kohn

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teaches away from a continuously variable transmission that includes a pair of radially floating cones since it uses only one spindle (51). Indeed, if the cones (35 and 36) in Kohn were permitted to radially float, the cones (35, 36) would not properly engage the spindle (51) since there is no other spindle (51) to facilitate centering, hence "floating" of the cones. Support for Applicant's amendment to claims 1 and 13 can be found, among other places, in the "Summary of the Invention" section of Applicants' specification, paragraph [0017] in the "Detailed Description of the Embodiments" section of Applicants' specification, and the Title of the Invention.

Additionally, regarding claims 1-9, 13 and 15, the Examiner acknowledges that Kohn does not disclose a pair of wheels having different diameters, but shows wheels having the same diameter. The Examiner contends, however, that it would have been an obvious matter of design choice to vary the size of the wheels, since such a modification would involve a mere change in the size of a component. The M.P.E.P. states that if a modification of a prior art reference would render the prior art invention unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. M.P.E.P. § 2143.01. Contrary to the Examiner's contention, modifying the roller spindle (51) in Kohn to include rollers (53) of different sizes would have rendered the Kohn transmission unsatisfactory for its intended purpose. More particularly, providing rollers (53) of different sizes on the spindle (51) would affect the angle of rotation of spindle (51). In the Kohn transmission illustrated in FIG. 5, the angle of rotation of spindle (51) is relatively small due to the uniform diameter of rollers (53). However, changing the diameter of one or both of rollers (53) such that the relative diameter of one roller is different than the other would significantly impact the degree of rotation of the spindle (53). (See, e.g., FIG. 2 of Applicant's drawings, which illustrates an exemplary degree of rotation for countershafts having ends of different diameter.) Among other limitations of the Kohn reference, increasing the angle of rotation of spindle (51) would cause the rollers (53) to contact platform 46 and thereby substantially limit the degree to which the transmission may change the speed of the propeller shaft. For at least these reasons, the Examiner has failed to set forth a prime facie case of obviousness under §103, and the rejection should be withdrawn.

Regarding claim 15, Kohn fails to teach, suggest or disclose a continuously variable transmission that includes a pair of axially spaced, cones having an outer tube shaft that supports

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one of the cones rigidly secured thereto, and a stepped diameter inner tube shaft that supports the second of the cones, each respective tube shaft supported on a plurality of spaced pilot bearings. Indeed, the cones (35, 36) disclosed in Kohn do not even support each other, let alone include the structure described in claim 15.

B. Claim 14 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kohn (U.S. Patent No 1,459,979) as applied to claim 13 above, and further in view of either Tsukada et al. (U.S. Patent No 6,174,260) or Edlich (U.S. Patent No 3,302,474). For at least the reasons stated above with respect to claim 1-9, 13 and 15, Kohn fails to teach or suggest each of the limitations recited in the claim. Moreover, Tsukada and Edlich fail to make up for the deficiencies of Kohn in that neither Tsukada nor Edlich teach or suggest a continuously variable transmission that includes axially spaced, *radially floating cones* and a pair of spaced apart countershafts relatively rotatable with a housing.

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**CONCLUSION**

In view of the above, each of the presently pending claims in this application is believed to be in condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. 65856-0034 from which the undersigned is authorized to draw.

Dated: 02-23-04

Respectfully submitted,

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